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„Optimized Synchronization Structure“
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Abstract

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10 The invention is based on the synchronization and training preambles. The optimizes
sequence is very suitable to generate a preamble or a part (also called field) of it by
mapping the sequence to the appropriate subcarriers of a OFDM symbol with a FFT
size of 64. The benefit of the invention is the improved timing accuracy when the
autocorrelation result in the B-FIELD is used for synchronization. The time domain
structures of the preambles according to the prior art are not changed according to the
invention. The advantages of the present invention can be summarized as follows:

15 The invention proposes an OFDM based synchronization symbol with a low peak-to-
average-power-ratio and a small dynamic range,
- the synchronization performance (timing accuracy compared to current preambles) is
improved,
- the specified time domain preamble structures according to the prior art are not
modified, and
20 - no extra complexity is needed.

(figure 1)